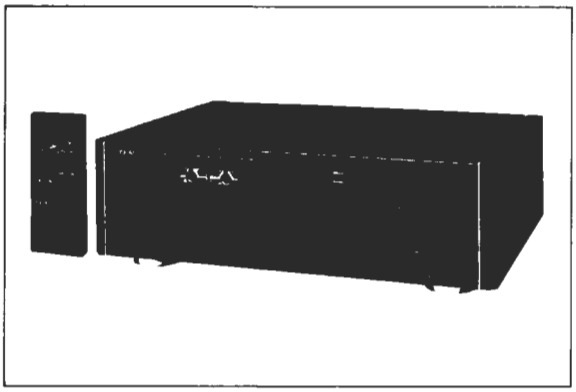
TEAC®

5700119300

R-9000/V-9000

STEREO CASSETTE DECK



OWNER'S MANUAL

Thanks for buying a TEAC. Read this manual carefully to get the best performance from this unit.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.
Model number _____
Serial number _____

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

SAFETY INSTRUCTIONS

CAUTION:

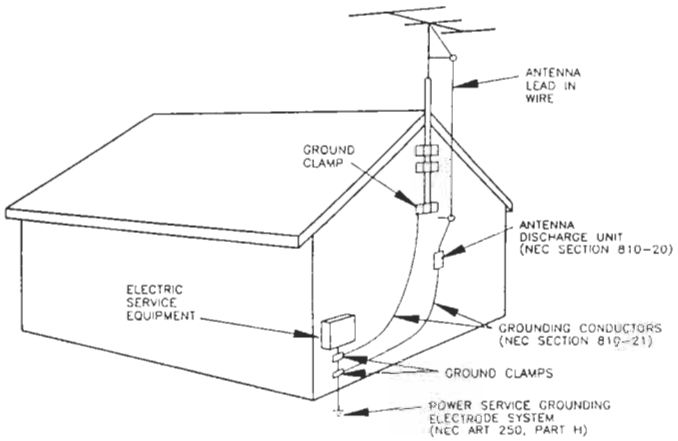
- **Read all of these instructions.**
- **Save these instructions for later use.**
- **Follow all warnings and instructions marked on the audio equipment.**

1. **Read Instructions** – All the safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions** – The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** – All warnings on the appliance and in the operating instructions should be adhered to.
4. **Follow Instructions** – All operating and use instructions should be followed.
5. **Water and Moisture** – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
6. **Carts and Stands** – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. **Wall or Ceiling Mounting** – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. **Ventilation** – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. **Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. **Power Sources** – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. **Grounding or Polarization** – The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
12. **Power-Cord Protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. **Cleaning** – The appliance should be cleaned only as recommended by the manufacturer.
14. **Power Lines** – An outdoor antenna should be located away from power lines.
15. **Outdoor Antenna Grounding** – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70 – 1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure below.

EXAMPLE OF ANTENNA GROUNDING
AS PER NATIONAL
ELECTRICAL CODE



NEC – NATIONAL ELECTRICAL CODE

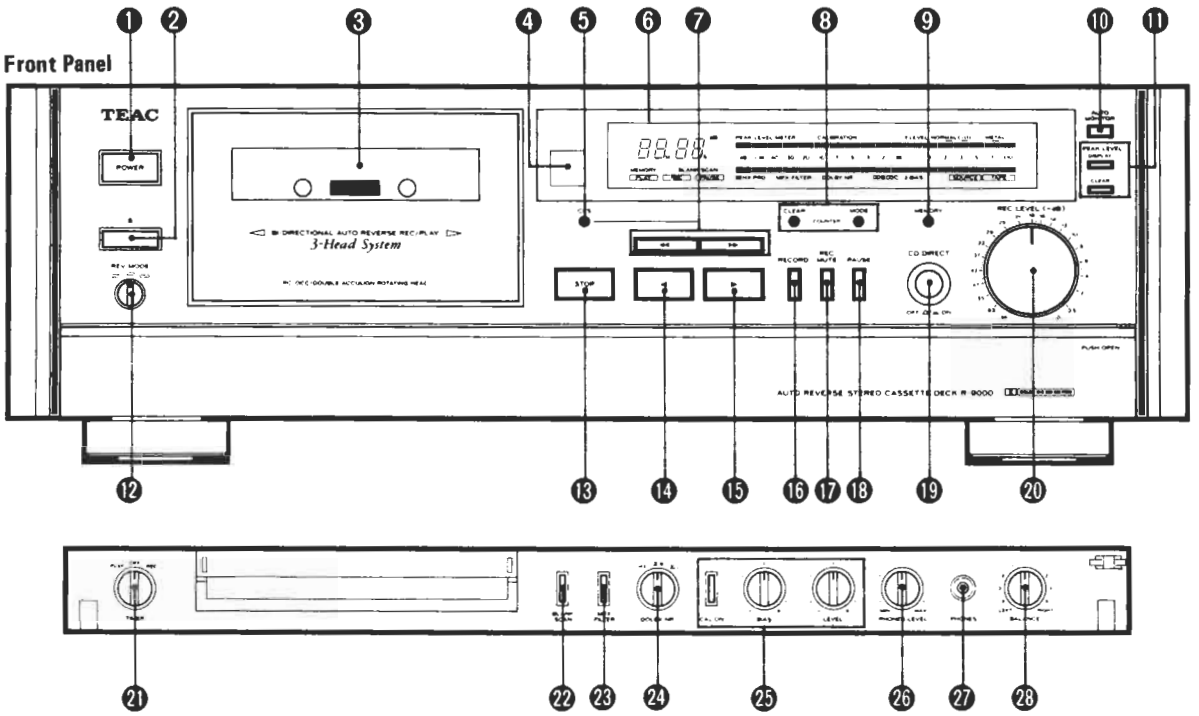
16. **Nonuse Periods** – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
17. **Object and Liquid Entry** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
18. **Damage Requiring Service** – The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped, or the enclosure damaged.
19. **Servicing** – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Reference Illustrations

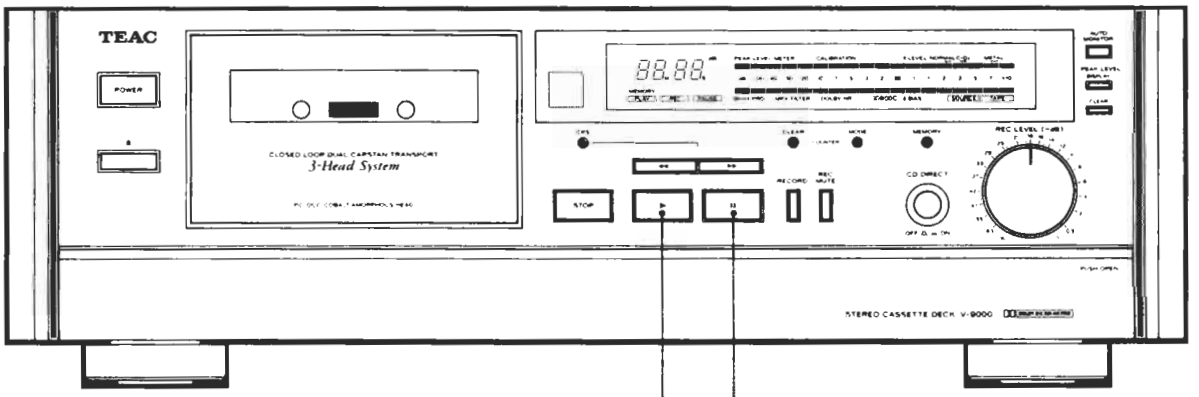
Fig. 1

Front Panel

R-9000



V-9000



(The V-9000 has a champagne gold or black finish.)

Multi-Display Window

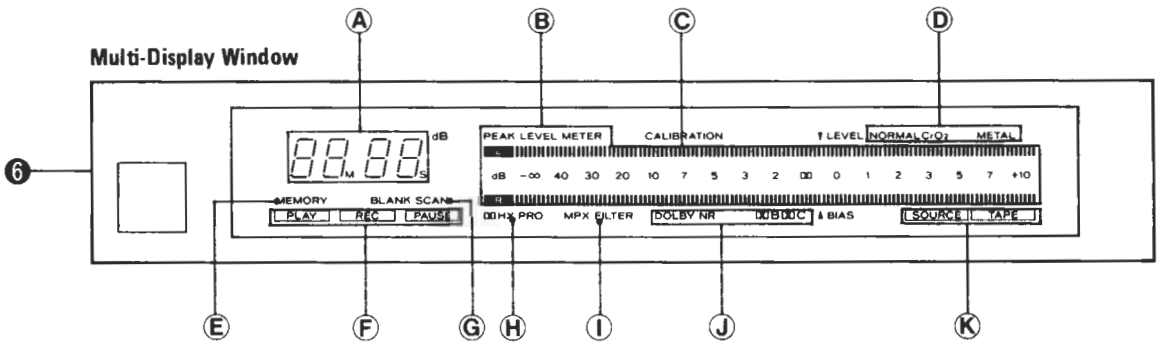
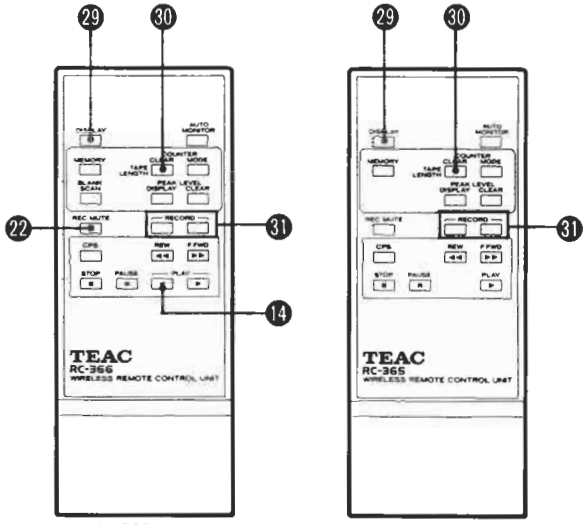


Fig. 2 Remote Control Unit



<R-9000>
RC-366

<V-9000>
RC-365

Rear Panel

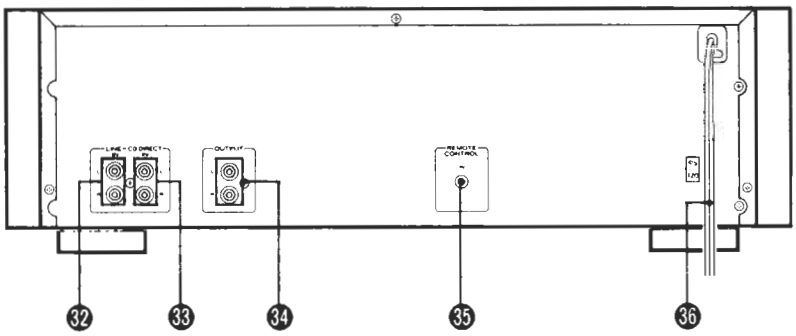


Fig. 3

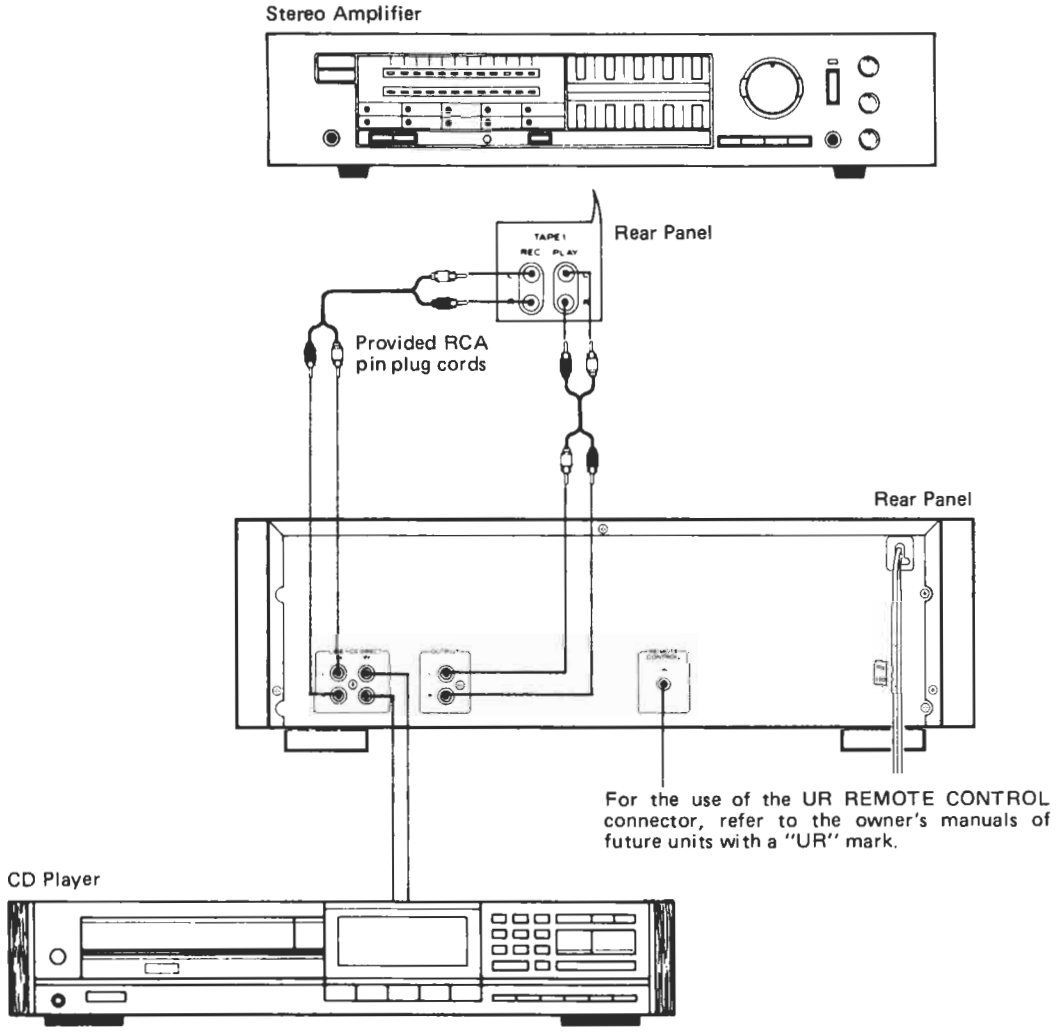
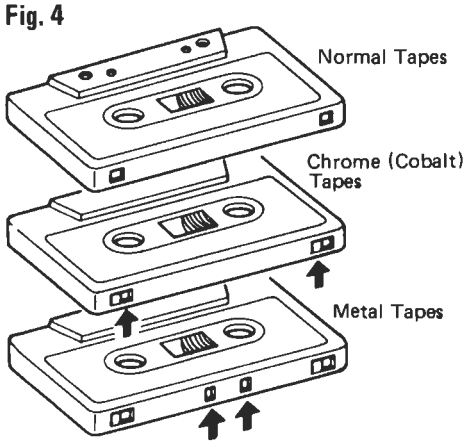

Stereo Amplifier
Rear Panel
Provided RCA pin plug cords
Rear Panel
For the use of the UR REMOTE CONTROL connector, refer to the owner's manuals of future units with a "UR" mark.
CD Player

Fig. 4



• Tape position identification holes

Fig. 5

Battery Placement

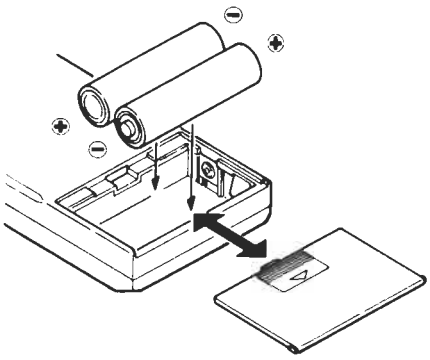


Fig. 6

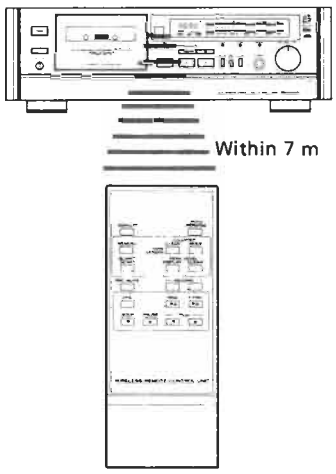


Fig. 7

Voltage Conversion

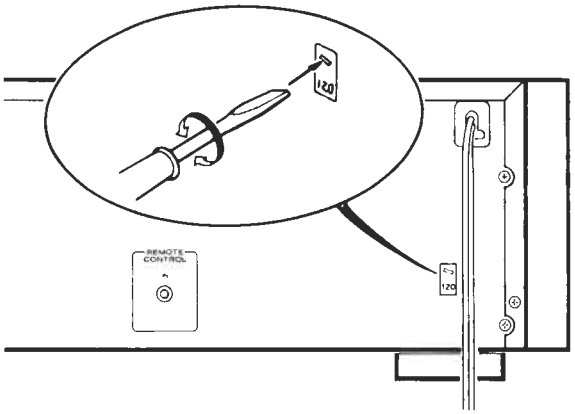


Fig. 8 (R-9000)

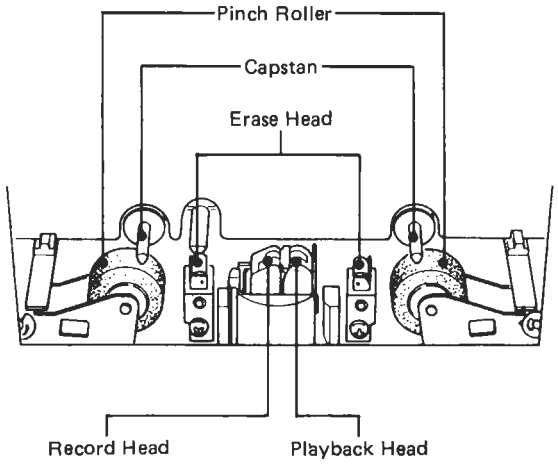
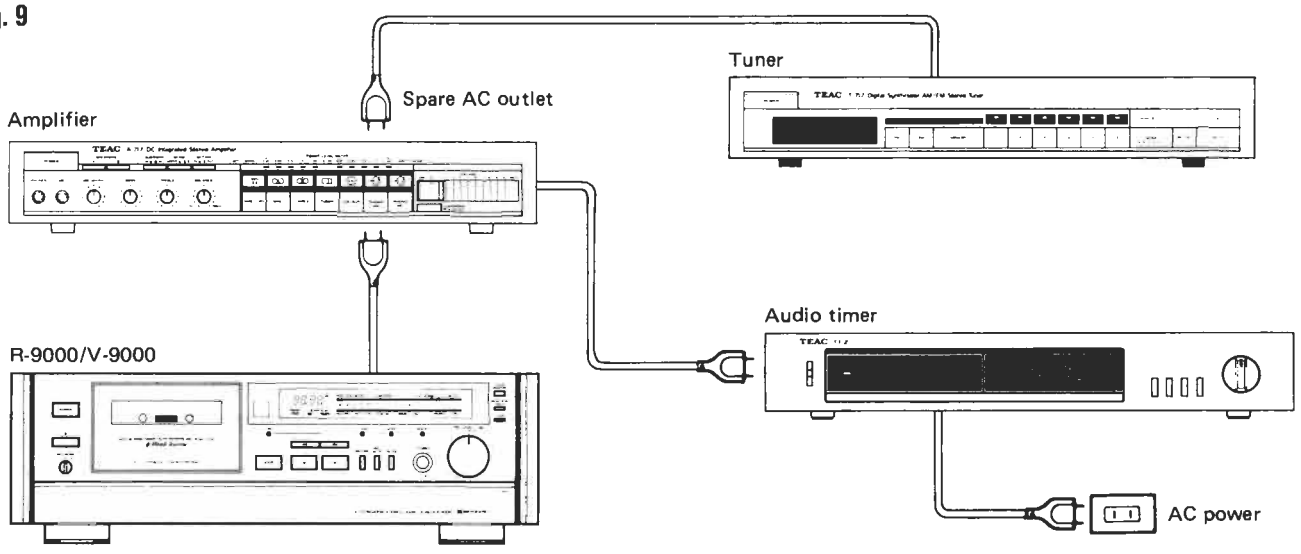


Fig. 9



Precautions

Environment
Avoid using the deck in the following conditions:
- At high temperatures (near a heater, exposed to direct sunlight, etc.).
- At extremely low temperatures.
- Where there is excessive humidity.
- In a dusty atmosphere.
- Where power line voltage fluctuations are severe (the use of a voltage regulator may be advisable).

Cassette Tape (Fig. 4)
Tape Selection:
For the automatic tape select function to work properly, metal and chrome (cobalt) tapes must have tape identification holes.

Tape Handling:
Do not store tapes in the following places:
- On top of heaters, exposed to direct sunlight or in any other places with high temperatures.
- Near speakers, on TV sets or amplifiers, or where they would be exposed to strong magnetic fields.
- Where humidity is high and in dirty, dusty places.

Avoid dropping or subjecting cassettes to excessive shocks.

Voltage Conversion (For general export models) (Fig. 7)
If it is necessary to change the voltage selector of the deck to be suitable for your area, use the following procedure:
1. DISCONNECT THE POWER LINE CORD.
2. Using a screwdriver, turn the selector until the required voltage marking appears.

IMPORTANT (for U.K. Customers)

The wires in this main lead are coloured in accordance with the following code:

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

In the U.K, this unit is sold without an AC plug.

THE APPLIANCE CONFORMS WITH EEC DIRECTIVE 87/308/EEC REGARDING INTERFERENCE SUPPRESSION

CONFORME AL D.M. 13 APRILE 1989
DIRETTIVA CEE/87/308

* Dolby noise reduction and HX PRO headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX PRO originated by Bang and Olufsen. "Dolby", the double-D symbol and "HX PRO" are trade marks of Dolby Laboratories Licensing Corporation.

Connections (Fig. 3)

- Turn off the power of all equipment before making connections.
- Read the instructions of each component you intend to use with the deck.
- The UR (Unified Remote Control) terminals are used for total system control when linked to future TEAC components. For the connection of the UR terminals, refer to the owner's manual of the component to which the deck is to be connected.

Features and Controls (Figs. 1 and 2)

Front Panel

❶ POWER Switch
Press to switch the deck on. The display window will be illuminated. Press again to turn the deck off.
Note: When switching the power on again after switching it off, be sure to wait for more than 3 seconds.

❷ Eject Button
Press in the stop mode to open the cassette holder. (Eject functions only in the STOP mode.)

❸ Cassette Holder
Load the cassette here.

❹ REMOTE SENSOR (Remote Control Infrared Signal Receptor)
This receives signals from the provided RC-366 (R-9000)/RC-365 (V-9000) infrared remote control unit.

❺ CPS Button
This button is used to activate the CPS (Computomatic Program Search) facility. For details, refer to page 9.

❻ Multi-Display Window

Ⓐ Multi-Counter
- **Tape Counter Mode (0000)**
  In this mode, the counter functions as a conventional tape counter, counting up when the tape is moving forward and down when the tape is being rewound (or reversed in the R-9000). The display can be cleared by pressing CLEAR button ❽, resetting the counter to "0000". If the DISPLAY button of the PEAK LEVEL buttons is pressed, the indication will be in "dB".
- **RT (remaining time) Counter Mode (00M00S):** The remaining time of tape is indicated during recording and playback.
- **TAPE LENGTH Mode:** Indicates the length of three types of tape C-46L, C-60 and C-90. When a tape is loaded, enter its length. (See page 9.)

Ⓑ PEAK LEVEL METER
This meter shows the peak level of the input or playback signal. The meter has a peak hold feature, which will hold very brief peaks that might otherwise pass unnoticed. In the record mode, the meter indicates the level of the source signals after adjustment with the record level controls. The highest peak to be recorded should generally not exceed the meter reference reading for the type of tape used. During playback, the meter indicates the level of the signals recorded on the tape.

Ⓒ CALIBRATION Indicator
Lights together with "LEVEL/BIAS" in the calibration mode.

Ⓓ Tape Type Indicator
Tape type indicator above the meter indicates the type of tape being used. The R-9000/V-9000 has an auto tape selector function, with which the NORMAL, CrO_2 or METAL indicator lights when a tape is loaded into the cassette holder.

Ⓔ MEMORY Indicator
Lights in the memory mode.

Ⓕ Mode Indicator
- **PLAY:** Lights during recording and playback. A direction indicator lamp also lights.
- **REC:** Lights in the recording mode and flickers during recording muting.
- **PAUSE:** Lights when the tape is stopped temporarily.

Ⓖ BLANK SCAN Indicator (R-9000 only)
Lights during the blank scan mode.

Ⓗ HX PRO: The Dolby HX Pro indicator lights during the recording mode, indicating that the Dolby HX Pro circuit incorporated in the deck is operating. This is engaged automatically whenever the deck is used for recording.

Ⓘ MPX FILTER Indicator
Lights when the multiplex filter has been activated.

Ⓙ DOLBY NR/ ▯▯ B/ ▯▯ C Indicator: Lights when the DOLBY NR selector is set to the ▯▯ B or ▯▯ C position.

Ⓚ TAPE/SOURCE Indicator
Indicates whether the deck is set for tape or source monitoring.

❼ ◄◄ (Rewind) Button/ ►► (Fast-Forward) Button
When these buttons are pressed, the tape is rewound or fast-forwarded. When used with the CPS feature, these buttons act as tune search buttons.

❽ COUNTER Buttons
- **CLEAR Button**

Pressing the CLEAR button resets multi-display tape counters to zero (0000).
* The CLEAR button also serves as a TAPE LENGTH button.
* If the tape length counter is displayed and the tape length indication is changed, the remaining time will also change.

- **MODE Button**

Press this button to switch the display between the conventional tape counter, the tape length counter and the tape remaining time counter.

❾ MEMORY Button
If the MEMORY button is pressed at any required position during recording/playback, the tape will stop at that position during rewind/fast forward or playback. (See page 10.)

❿ AUTO MONITOR Button
This button allows you to select which signal is to be monitored with its level displayed by the meter. When power is first applied to the deck, the monitor mode is set to TAPE, in which mode the signal recorded on the tape is monitored with its level displayed by the meter. When the deck enters the record-pause mode, the monitor mode is automatically switched to SOURCE, showing that the signal input to the deck (from the LINE IN jacks on the rear panel) is being monitored and its level displayed. And when the record-pause mode is released, it is automatically changed to TAPE.
To change the monitor mode manually, press this button.

⓫ PEAK LEVEL Buttons
- **DISPLAY:** If this button is pressed, the counter will hold any peak from 0 to +12 dB for a few seconds.
- **CLEAR:** Press this button to release the peak hold indication memory.

⓬ REV(ERSE) MODE Select Switch (R-9000 only)
Set this button to select the reverse mode. Operations in each mode are as follows:
⇀ : When the tape reaches the end, playback (or recording) will stop.
⇁ : In the forward play or record mode, when the tape reaches the end, the direction of tape travel is reversed and playback or recording continues until the end of the reverse side. In this mode, when both sides of the tape have been played or recorded, the deck will stop.
↻ : When the tape reaches the end during either forward or reverse play, the direction of tape travel will be reversed and playback will be repeated a maximum of 10 times or until the STOP button is pressed. In this mode, recording will be done in the same way as in the ⇁ position.

⓭ STOP Button
Press to stop tape travel and release any operation mode.

⓮ ◄ (Reverse Play) Button (R-9000 only)
Press the ◄ side to play in the reverse direction.

⓯ ► (Play) Button
Pressing this button causes the tape to run at normal speed (from left to right).

⓰ RECORD Button
Press this button together with the ► button (◄ or ► on the R-9000) to start recording. The red RECORD indicator lights.

⓱ REC MUTE Button
Press this button during recording to provide a blank section between tunes (approx. 4 seconds). The deck will enter the record-pause mode. Press the play (►) button to start recording again. (See page 8.)

⓲ PAUSE Button
Press to temporarily stop tape travel during recording or playback. In the pause mode, the PAUSE indicator in the multi-display lights. Press the play (►) button again to restart the tape (the indicator goes out).

⓳ CD DIRECT Button
If the CD DIRECT button is set to the on position, the signals supplied from a CD player to the CD DIRECT IN connectors will have priority over the LINE IN signals and be recorded.

⓴ REC LEVEL Control:
When recording, turn the REC LEVEL control clockwise to fade the input sound in or turn it counterclockwise to fade the sound out, for smooth tune-to-tune transitions.

㉑ TIMER Switch
PLAY: For timer playback
OFF: Set to this position when not using a timer.
REC: For timer recording
(Refer to page 11.)

㉒ BLANK SCAN Button (R-9000 only)
With this button engaged, (an indicator lights in the multi-display window), when a blank portion of more than 10 seconds is detected, the tape skips to the beginning of the next tune, from which point playback resumes. When the button is pressed again, this function is cancelled (the indicator goes off). (See page 10.)

㉓ MPX FILTER Button
Press this button when making a recording of an FM broadcast using Dolby NR; the indicator lights. This eliminates the pilot tone (19 kHz) and sub carrier tone (38 kHz) of the FM broadcast which could affect operation of the Dolby noise reduction system. To release this function, press the MPX FILTER button again.

㉔ DOLBY NR Selector
OFF: Set to this position when you do not want to use any noise reduction system.
▯▯ B: Set to this position when making a recording using the Dolby B noise reduction system, or playing back tapes recorded with Dolby B NR.
▯▯ C: Set to this position when making a recording using the Dolby C noise reduction system, or playing back tapes recorded with Dolby C NR.

㉕ Calibration Level Controls
CAL ON Button:
Press this button to start the calibrating operation. For details, refer to "Calibration Procedure" on page 9.)
BIAS Control:
Used to adjust the bias current to obtain the optimum recording characteristics for the tape used.
LEVEL Control:
Used to adjust the level difference between the left and right channels precisely.

㉖ PHONES LEVEL Control
Adjust the level of the signals output from the PHONES jack. This knob does not affect the level of the signals output from the OUTPUT jacks on the rear panel or the level indicated by the PEAK LEVEL METER.

㉗ PHONES Jack
Plug stereo headphones into this jack for private listening or monitoring.

㉘ BALANCE Control
Adjust the balance of the input signals between the left and right channels to be recording on tape.

Remote Control Unit

㉙ DISPLAY Button
Press this button to switch off the multi-display.

㉚ TAPE LENGTH (CLEAR) Button
Provides the same function as the CLEAR button on the main unit. (See page 7.)

㉛ RECORD Buttons
When initiating recording from the remote control unit, press these two buttons simultaneously.

Rear Panel

㉜ LINE IN Terminals
Connect the amplifier's REC OUT jacks to these jacks.

㉝ CD DIRECT IN Terminals
Connect the OUTPUT terminals of a CD player to these jacks.

㉞ OUTPUT Terminals
Connect the amplifier's TAPE PLAY or LINE IN jacks to these jacks.

㉟ UR (Unified Remote Control) REMOTE CONTROL Terminal
This terminal is used to link components with a "UR" mark which will be released in the future.

㊱ Power Supply Cord
Insert into an AC wall outlet, etc. The voltage required by this unit is shown on the rear panel.

Playback and Recording

Stereo Playback

1. Press the POWER switch to ON.
2. Press the eject (≜) button and load the required cassette.
3. Select a tape length
   1) Press the CLEAR button. The counter will be "0000".
   2) Press the MODE button. Normally, the indication will show "C-60".
   3) Press the CLEAR button to select the tape length. The tape length will be changed in the order C-46L, C-60, C-90.
   * If the tape length is changed during recording or playback, the RT counter indication will not be correct.
4. R-9000 only: Set the REV(ERSE) MODE switch to select the required tape travel mode.
5. Select the required NR system.
6. Press the ► button on the V-9000, (► or ◄ button on the R-9000) to start playback.
7. Adjust the volume with the amplifier's control.
8. To end playback, press the STOP button.

Stereo Recording

Recording from a Stereo System:

1. Press the POWER switch to ON.
2. Press the eject (≜) button and load the cassette on which the recording is to be made.
3. Select the tape length
   1) Press the CLEAR button. The counter will show "0000".
   2) Press the MODE button. Normally, the indication will show "C-60".
   3) Press the CLEAR button to select the tape length. The tape length will be changed in the order C-46L, C-60, C-90.
4. R-9000 only: Set the REV(ERSE) MODE switch for recording on one side. If you want to make a bi-directional recording, set to the ⇉ /⇄ position.
5. Select the NR system used in recording.
6. Set the BIAS/LEVEL controls to their center detente positions.
7. Select an input using the CD DIRECT select button.
8. Play the source to be recorded.
9. Press the AUTO MONITOR button so that the SOURCE indicator lights. This enables you to adjust the recording level without recording on the tape.
10. Adjust the recording level.
    Using the REC LEVEL/BALANCE controls, adjust the recording level of each channel.
11. R-9000 only: Press the PAUSE button and the (◄ / ►) Forward/Reverse Play Buttons to determine the recording direction.
12. Press the RECORD button and the ► button (◄ or ► for the R-9000) to start recording.
13. To end recording, press the STOP button.

Notes:

- To interrupt recording temporarily, press the PAUSE button. To resume recording, press it again.
- As this deck has an auto tape selector mechanism, be sure to use cassettes with tape detection holes. If they do not have detection holes, the optimum results will not be obtained with chrome and metal tapes.
- R-9000 only: It is recommended to load the tape with side A facing towards you so that, when the ► button of the ◄ / ► buttons is pressed, recording/playback will be performed on side A.
- As C-120 tapes are physically weak and could become entangled in the transport mechanism, do not use them.

CAUTION:
Recording pre-recorded tapes, records, or other published or broadcast material may infringe copyright laws. Check before recording.

Record Muting Operation

The ability to leave blank unrecorded (erased) sections on a tape during recording is a real advantage in many recording situations. For instance, you may want to eliminate undesired portions of an FM broadcast that you are recording, such as commercials, station breaks or announcements. You may also want to record a complete program with controlled spacing between each tune. Such blank sections can easily be left using the REC MUTE function.

1. Automatic Spacing Operation - for a 4-second blank - (during recording)
   Press the REC MUTE button during recording. The tape continues to run, and a blank of about 4 seconds is recorded (the REC indicator flashes).
   After 4 seconds, the deck switches automatically to the record-pause mode (both the REC and PAUSE indicators light). To start recording the next tune, press the PAUSE button (the PAUSE indicator goes off).
2. Automatic Spacing Operation - for a 4-second blank - (during record-pause)
   If the REC MUTE button is pressed while in the record-pause mode, the REC indicator blinks to indicate the record-muting stand-by mode. When the Forward/Reverse play (◄ / ►) button is pressed, the tape starts running and the above automatic spacing operation will be initiated.

- For a Blank of More Than 4 Seconds
  During recording, keep the REC MUTE button pressed for a longer blank section. Release the button to enter the record-pause mode.
- For a Blank of Less Than 4 Seconds
  After pressing the REC MUTE button during recording, press the PAUSE button before the 4-second interval has expired, to cancel the muting mode and engage the record-pause mode. To restart recording, press the PAUSE button. Or press the REC MUTE button again to resume recording without stopping the tape.

Erasing

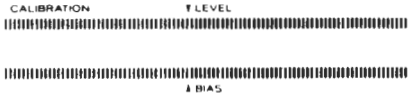
Previously recorded tapes will be erased automatically when you make a new recording on them. Alternatively, tape can be erased by "recording" on them with the REC LEVEL control set to "0".

Calibration Procedure

Tapes with various formulas are available from different manufacturers. In some cases, however, even when tapes are of the same type, they may differ depending on the brand or lot. The calibration controls allow you to adjust the recording level and bias for the optimum performance of any tape.

1. Load the tape on which you want to record.
2. Press the PAUSE button, then press the RECORD button. (On the R-9000, if the reverse play button ◄ is pressed together with the RECORD button, calibration is impossible.)
3. Press the CAL ON button. The recording of the internally generated calibration signal starts, and the indicators light.
4. Press the ► button. The direction indicator lights and the tape starts.
5. Turn the BIAS control so that the bias indications of the upper and lower level indicators indicate the same level.

6. Adjust the LEVEL control so that the upper and lower level indicators reach the arrowheads indicating the optimum level.



7. Repeat steps 5 and 6 several times to obtain the optimum bias and level.
8. Upon completion of calibration, press the STOP button, then press the CAL ON button again to release the calibration mode.

Notes:

- When recording without calibration adjustment, be sure to set the LEVEL and BIAS controls to their center click positions.
- Due to the characteristics of metal tape, the deck cannot be calibrated for optimum performance with this type of tape. This is not a malfunction.
- During calibration, the signal from the LINE IN or CD DIRECT jacks will be automatically cut off.
- As the test tone during calibration is recorded on the tape, erase it by recording over it.

Tape Counter and RT Counter Function

The multi-display counter has three different display modes, depending on the settings of the MODE and CLEAR buttons.
Tape Counter Mode: The counter functions as a conventional tape counter.
RT (remaining time) Counter Mode: The counter functions as a remaining time counter, counting down the amount of tape time remaining.

Using as a Tape Counter

When the power is switched on, a 4-digit display will appear. It works in exactly the same way as a conventional tape counter. During recording (including record muting) and playback in the forward direction and fast-forwarding, the counter counts up as the tape moves from left to right, and down during reverse modes and rewind as the tape moves from right to left. Its indication is not related to elapsed time and is not compatible with the counter readings of other cassette decks. One typical example of how this display can be used in the conventional tape counter mode is: First load a cassette and, before recording, press the CLEAR button to reset the counter to "0000". Then note the counter reading at the beginning of each piece of music to facilitate locating that particular selection when you want to play it back.

Using as a RT Counter

Using the MODE button, call up the tape remaining time mode; a colon appears between the 2nd and 3rd digits. In this mode, the amount of tape remaining is displayed in minutes and seconds while the tape is running at normal speed during recording (including record muting) and playback. Counting stops while rewinding and fast forwarding. This function shows how much tape is left and can be used to measure the approximate time it takes to play a tune.

Using as a TAPE LENGTH Counter

When the MODE button and CLEAR button are pressed, a tape length (C-46L/C-60/C-90) will be indicated.

C-46L: When a large hub C-46 tape is used
C-60: When C-60/50/46/30/10 tape is used
C-90: When a C-90/80 tape is used

- When using the RT counter mode, be sure to set tape length.
- Both the tape counter and RT counter continue to count up or down even when there is no corresponding indication in the display window.

CPS (Computomatic Program Search) Function

CPS allows the playback of the tune up to 15 tunes ahead or before the one being played. This function operates by detecting blank spaces of at least 4 seconds between tunes. These blanks can be created using the REC MUTE facility.

1. Press the CPS button repeatedly or hold it until the number of tunes to be skipped appears in the multi-display counter. Refer to the chart "How to Select any Required Tune Using CPS".
- If you count past the required number, keep on pressing the CPS button as 1 appears after 15 is indicated.

2. Press the ◄◄ or ►► button, depending on the direction in which search is to be performed.
3. As the tape is fast-wound and blank spaces between tunes are detected, the displayed number will be counted down until it reaches "1", at which point playback will start.

(R-9000)
When using CPS, the tape side is determined by the setting of the REV(ERSE) MODE button. See chart "CPS Tape Side Determined by REV(ERSE) MODE Switch".

Notes on CPS

CPS operates by detecting and counting blanks of about 4 seconds, normally the intervals between tunes. Therefore, with the following types of tapes, search functions may not work correctly.

- When the intervals between tunes cannot be detected.
  - Intervals of less than 4 seconds.
  - High levels of noise in intervals (due to recording old scratched records, poor FM or AM reception, etc.).

- When parts of the program are likely to be detected as intervals between tunes:
  - Long low level sections (in classical music, etc.)
  - Momentary pauses in a speech at a conference, etc.
  - Continuing low level portions created by fading out, etc.
- In the case of tapes containing fade-outs, because the length of the blanks can differ depending on how fading out was performed, some tune intervals may be detected and others may not.

This problem can be corrected using the REC MUTE facility.

Memory Stop

The current position of the tape is held in memory when the MEMORY button is pressed there during recording or playback, then, when the tape is fast forwarded, rewound or played, the tape stops at this position.

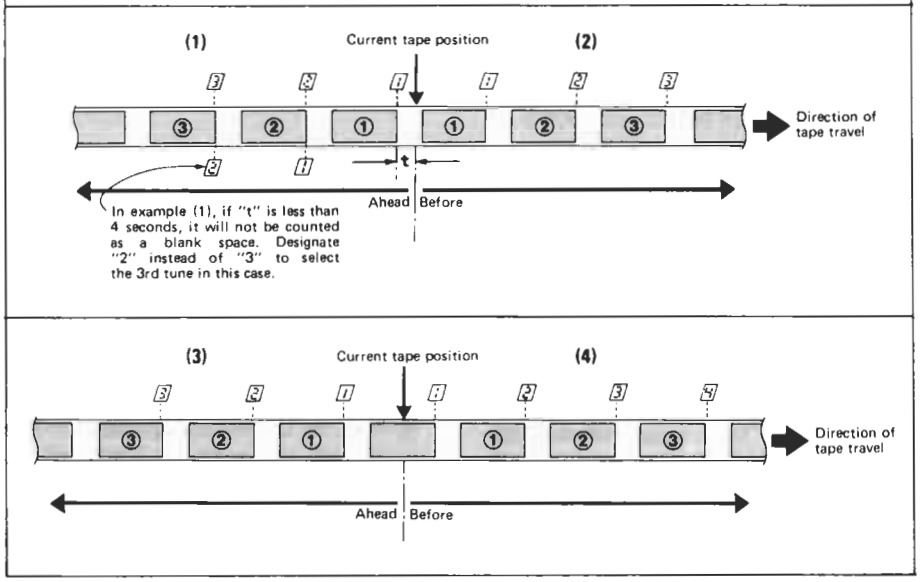
1. Press the MEMORY button at the required position during play, play-pause, record, record-pause or record-mute.
2. Press the ◄◄ / ►► or ◄ / ► button after playback or recording. When the position at which the button was pressed is reached, the tape will stop automatically.
3. To clear the memory function, press the MEMORY button again.
   It can also be cleared by pressing the eject (≜) button or POWER button.

Notes:

- The tape transport may not always start or stop exactly at the memorized counter reading due to inertia in fast forwarding or rewinding.
- Although the MEMORY button can be pressed during fast-forward or rewind, the memory position will be the position of the tape when it was loaded into the deck.

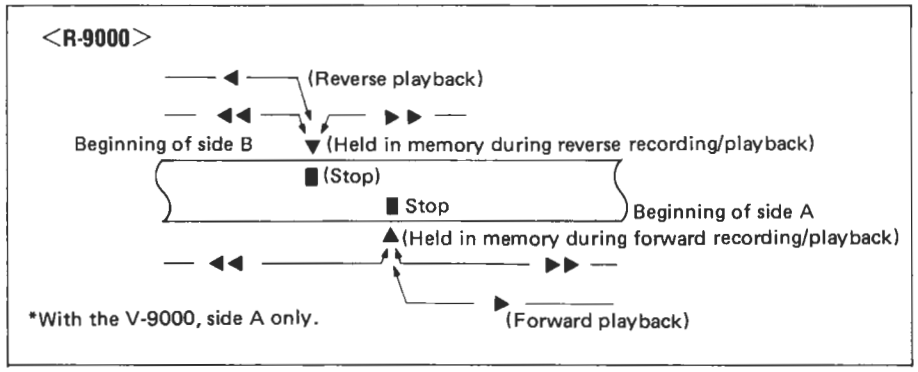
How to Select any Required Tune Using CPS

Ex: See (1). To select the 3rd tune past the current tape position, select "3".



CPS Tape Side Determined by REV MODE Switch (R-9000)

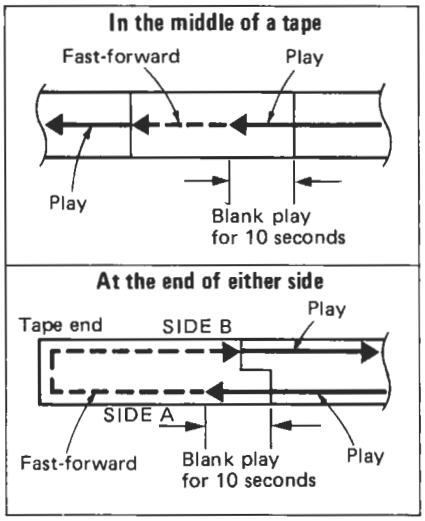
Search Direction	Direction Indicator	Reverse Mode	CPS Tape Side		
			⇄	→	↻
►►	▷		Side A only	Side A → Side B	Side A ⇄ Side B or Side B ⇄ Side A
	◁		Side B only	Side B only	
◄◄	▷		Side A only	Side A only	
	◁		Side B only	Side B only	



BLANK SCAN Facility (R-9000 only)

This facility is provided so that the deck will skip long blank sections during playback, for greater efficiency.

1. During playback, press the BLANK SCAN button (the indicator will light).
2. If a blank section of more than about 10 seconds is detected during playback, the deck will automatically fast forward the tape to the beginning of the next recorded section, from which point playback will resume.
3. To release this function, press the BLANK SCAN button again (the indicator will go off).
4. If the STOP button is not pressed, the point at which the deck stops is determined by the setting of the REV(ERSE) MODE switch.



Note:
- If the signal is particularly low level for more than 10 seconds continuously, such as a pianissimo section in classical music, etc., it may be detected as a blank and the Blank Scan operation may be engaged erroneously.

Timer-Controlled Operations (Fig. 9)

Timer-Controlled Recording

1. Connect your deck and stereo system to a commercially available clock timer as shown in the diagram.

(R-9000)

Determine the side of tape on which you want to start recording with the ◄ or ► button.

2. Make all the preparations for normal recording, but leave the deck in the stop mode.
3. Set the audio timer to the required start (power on) and stop (power off) times.
4. Set the TIMER switch on the deck to REC. When the preset start time is reached, power will be supplied and recording will start.

(R-9000)

Note: The tape direction (◄ or ►) does not change when the power is switched off. Take this into consideration when performing timer-controlled operation.

Timer-Controlled Playback

1. Check that the deck is correctly connected to the amplifier for normal playback operation.
2. Connect the deck and amplifier to an audio timer as for timer-controlled recording.

(R-9000)

Determine the side of tape you want to play first.

3. Make all preparation for normal playback, but do not start the tape.
4. Set the audio timer to the required start (power on) and stop (power off) times.
5. Set the TIMER switch on the deck to PLAY.
   When the preset start time is reached, power will be switched on and playback will start.

Remote Controlled Operation (Fig. 2)

The provided RC-366 (R-9000) or RC-365 (V-9000) remote control unit allows the R-9000/V-9000 to be operated from a distance. The control buttons on the remote control unit function in almost the same way as those on the front panel of the R-9000/V-9000, but they have slightly different names, etc.

Precautions on Remote Control Operation (Figs. 5 and 6)

1. Battery Replacement

1. Remove the lid.
2. Insert 2 "AA" type dry batteries. Be sure that the batteries are inserted with their negative and positive terminals positioned correctly.
3. Close the lid until it clicks.

How often should the batteries be changed?
The batteries will normally last about six months. However if you notice that the distance between the remote control unit and the R-9000/V-9000 required for operation becomes shorter, the batteries should be changed. Replace the batteries with two new ones.

Precautions Regarding Batteries

- Be sure to insert the batteries with the positive (+) and negative (–) terminals positioned correctly.
- Never use old and new batteries together.
- Replacement batteries should be of the same type. Never use batteries of different types together.
- Rechargeable and non-rechargeable batteries can be used. Refer to their precaution labels.
- Remove the batteries from the remote control unit when it will not be used for a long period of time.
- When the batteries are weak, replace them as soon as possible.
- Do not heat or disassemble batteries and do not dispose of them by throwing them into a fire.

2. Remote Control Unit RC-366 or RC-365

When operating using the remote control, point the front of the unit at the remote sensor of the R-9000/V-9000. The remote control unit can be used within the range shown in Fig. 6.

Notes:

- Even if the remote control unit is operated within the effective range, remote control operation may be impossible if there is any obstruction between the R-9000/V-9000 and the remote control unit.
- If the deck is operated in the vicinity of other appliances generating infrared rays, or if other remote control devices using infrared rays are used near the R-9000/V-9000, the deck may operate incorrectly. Conversely, if the R-9000/V-9000's remote control unit is operated in the vicinity of other appliances which use an infrared remote control device, the other appliance may operate incorrectly.
- When the unit will not be used for a long period of time (more than one month), remove the batteries to prevent them from leaking. If they do leak, wipe off the liquid inside the battery compartment and replace the batteries with new ones.
- Do not place books or other objects on the remote control unit as they could press the buttons and discharge the batteries.

Maintenance (Fig. 8)

The heads and tape path should be cleaned and demagnetized periodically.

Cleaning the Tape Path

- Apply head cleaning fluid* to special cotton swabs or a soft cloth, and lightly rub the heads, capstans and all metal parts in the tape path.
- Also clean the pinch rollers using rubber cleaning fluid*

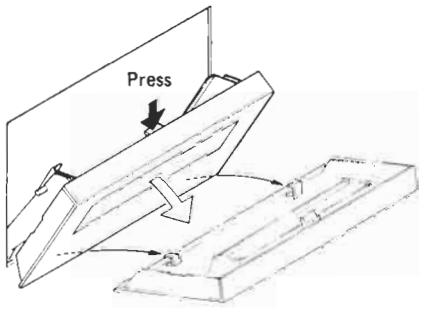
* Both are available as TEAC HC-1 and RC-1 in the U.S.A. or in the TEAC TZ-261 Tape Recorder Cleaning Kit in other areas.

Demagnetizing Heads

Be sure that the power is off, then demagnetize the heads using a TEAC E-3 demagnetizer or equivalent. For details of its use, read its instructions.

Removing the Cassette Lid

For easy access to the heads to clean or demagnetize them, remove the cassette lid by pressing the tab shown below.



*When removing the lid, be sure to hold it.

Troubleshooting

Basic troubleshooting of a cassette tape deck is similar to troubleshooting any other electrical or electronic equipment. Always check the most obvious possible causes first. To give you a few ideas of what to look for, check the following:

- No power: Is the power cord connected?
- Tape begins running when power is turned on. Is the TIMER function switched on?
- No audio output. Have all connections been done correctly?

- Degraded sound quality: Are the heads dirty or magnetized? Are you using good quality tape? Is the NR selector in the correct position?
- Unable to select the record mode: Are the record protection tabs of the tape in place?

DOLBY HX PRO

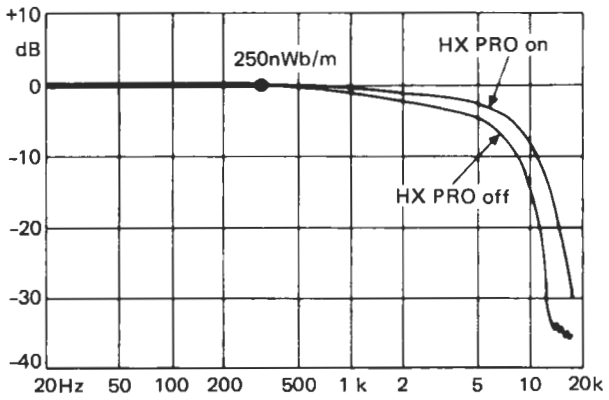
Dolby HX Pro is an "active bias" technique that can improve the quality of audio tape recordings. High-level high frequencies can be recorded more accurately, without sacrificing signal-to-noise ratio, while such side effects of tape saturation as distortion are reduced.

What Is Bias?
Bias is a very high-frequency signal generated within a tape deck and recorded on the tape simultaneously with the program material. This inaudible signal allows a low noise, low distortion recording and flat frequency response. Different magnetic tape formulations require different amounts of bias for optimum performance. If the bias level is too high, high-frequency Maximum Output Level (MOL) decreases.

The Problem of Self-Bias
Unfortunately, bias level is often influenced by the signal being recorded. The high frequencies contained in some music act as bias. This unpredictable source of bias is added to the existing bias, resulting in a loss of high-frequency response. As the high-frequency content of the signal increases, the ability of the recorder to record high frequencies (MOL) decreases. This phenomenon is called self-biasing.

How Dolby HX Pro Solution
The Dolby HX Pro monitors the high-frequency content of the program material and adjusts the recorder bias oscillator to maintain a constant total bias level. The result is improved high-frequency response and lower distortion. Depending on the type of tape, the improvement in headroom can be 6 dB or more.

The Benefits
With Dolby HX Pro, it is easier to make more accurate recordings of the kind of music which contains high-level high frequencies. The improvement is similar to that of high-performance tape over conventional tape, so regardless of the type of tape used, the results will sound better.
Most important of all, Dolby HX Pro requires no decoding process. Once the tape is recorded with it, the improvements will be realized when playing the tape back on any machine.



Example of improved frequency response using Dolby HX Pro function

Specifications

Track System 4-Track, 2-Channel Stereo
Heads R-9000 4: 2 Erase, 1 Record and 1 Playback (Rotary)
V-9000 3: 1 Erase, 1 Record and 1 Playback (Combination)
Type of Tape Cassette tape C-60 and C-90 (Philips type)
Tape Speed 4.8 cm/sec. (1-7/8 ips)
Motors 3: 1 DC Servo motor (for capstan drive)
1 DC motor (for reel drive)
1 DC motor (for ancillary control)
Wow and Flutter (WRMS)
0.03 % (R-9000), 0.025 % (V-9000)
Frequency Response (Overall) –20 dB
20 – 21,000 Hz Metal Tape (25 – 20,000 Hz ± 3 dB)
20 – 20,000 Hz CrO_2 Tape (25 – 19,000 Hz ± 3 dB)
20 – 18,000 Hz Normal Tape (25 – 17,000 Hz ± 3 dB)
Signal-to-Noise Ratio (Overall)
60 dB (NR OFF 3% THD Level, Weighted)
70 dB (Dolby B In, over 5 kHz),
80 dB (Dolby C In, over 1 kHz),
Fast Winding Time Approximately 70 seconds for C-60
Inputs CD direct/Line: 60 mV, 50k ohms
Outputs Line: 0.775 V for load impedance of 50k ohms or more
Headphones: 40 mW (max.), 8 ohms
Power Requirements 100/120/220/240 V AC, 50/60 Hz (General export models)
120 V AC, 60 Hz (U.S.A./Canada)
220 V AC, 50 Hz (Europe)
240 V AC, 50 Hz (U.K./Australia)
Power Consumption 28 W
Dimensions (W x H x D)
476 x 149 x 355 mm (18-3/4" x 5-7/8" x 14")
Weight 10.2 kg (22.5 lbs.)
Standard Accessories
Wireless Remote Control Units RC-366 (R-9000), RC-365 (V-9000), Batteries (SUM-3, "AA", "R6" type) x 2, Input-output connection cords

- Specifications were determind using metal tape except as noted.
- Improvements may result in specifications or features changing without notice.
- Photos and illustrations may differ slightly from production models.

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PRINTED IN JAPAN 0990U2·M-0358C